MAY 19 '86

I 49.89/2:85(15) map B12

ORIGINAL

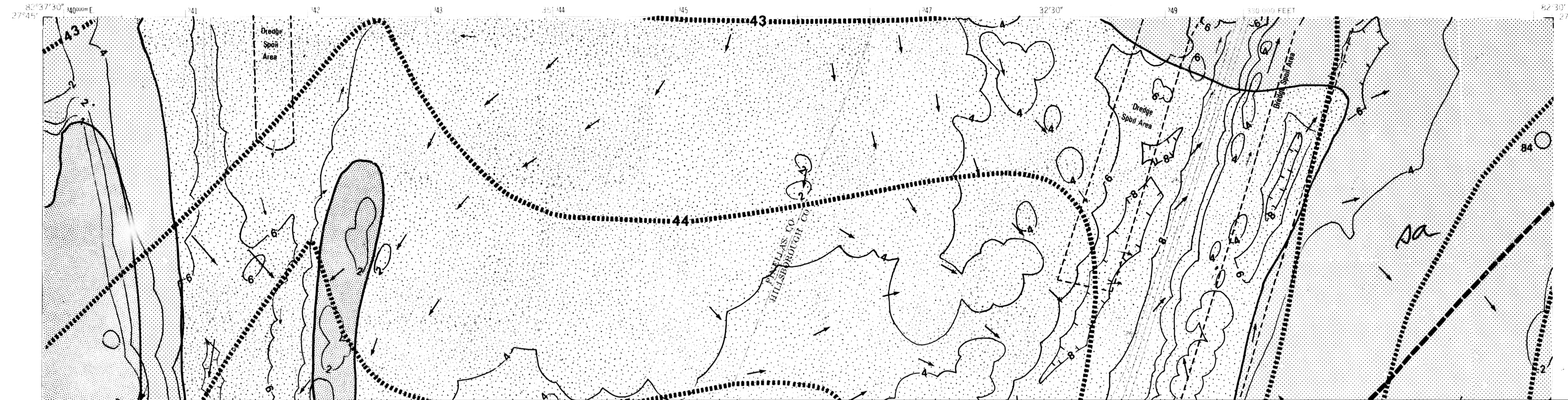
MAY 19 '86

ORIGINAL

I 49.89/2: 85(15) map B12

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

COCKROACH BAY QUADRANGLE
FLORIDA
7.5 MINUTE SERIES (TOPOGRAPHIC)

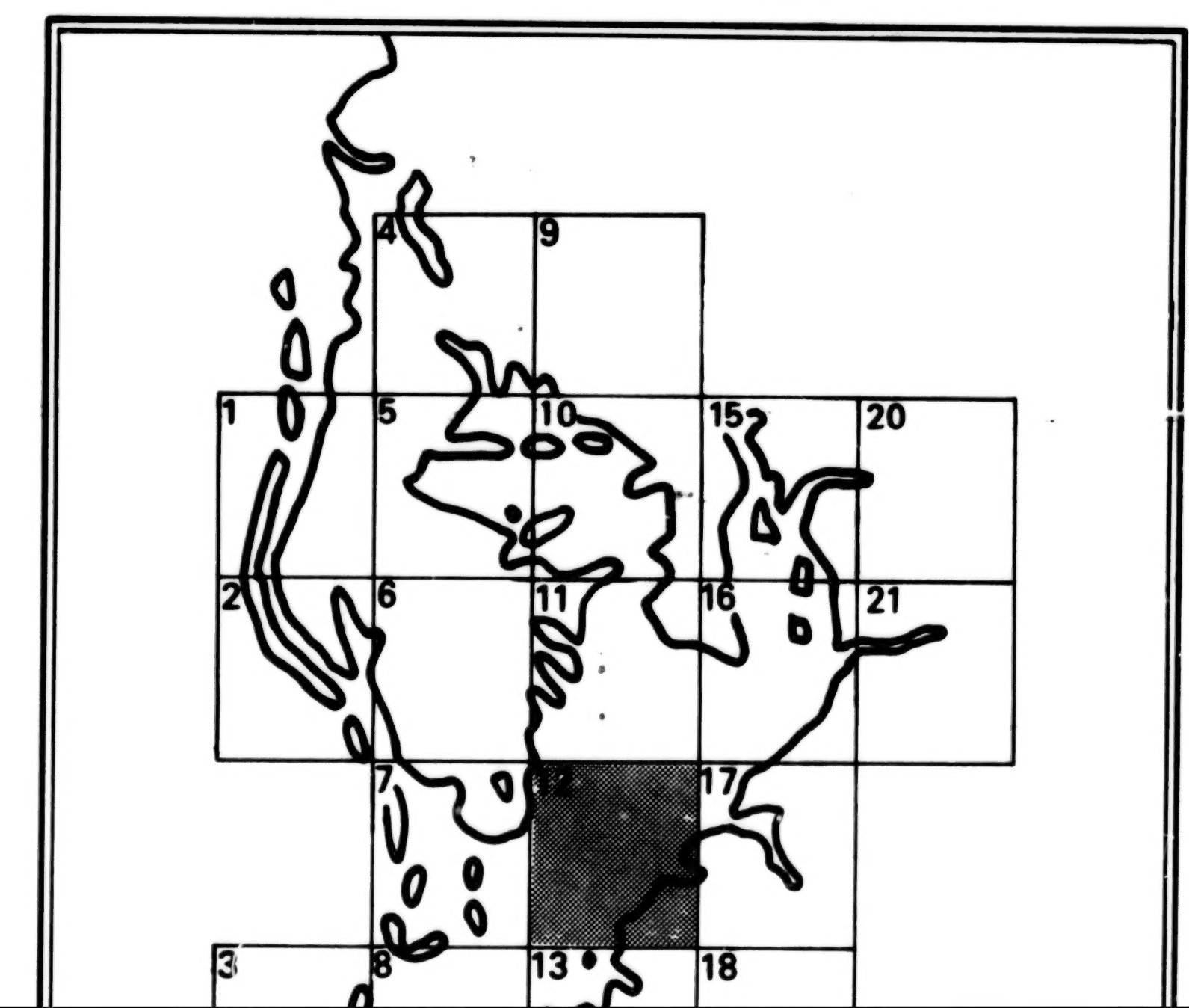

330 000 FEET
82°30'
27°45'
43
44
Dredge Spoil Area
4
6
84
sa

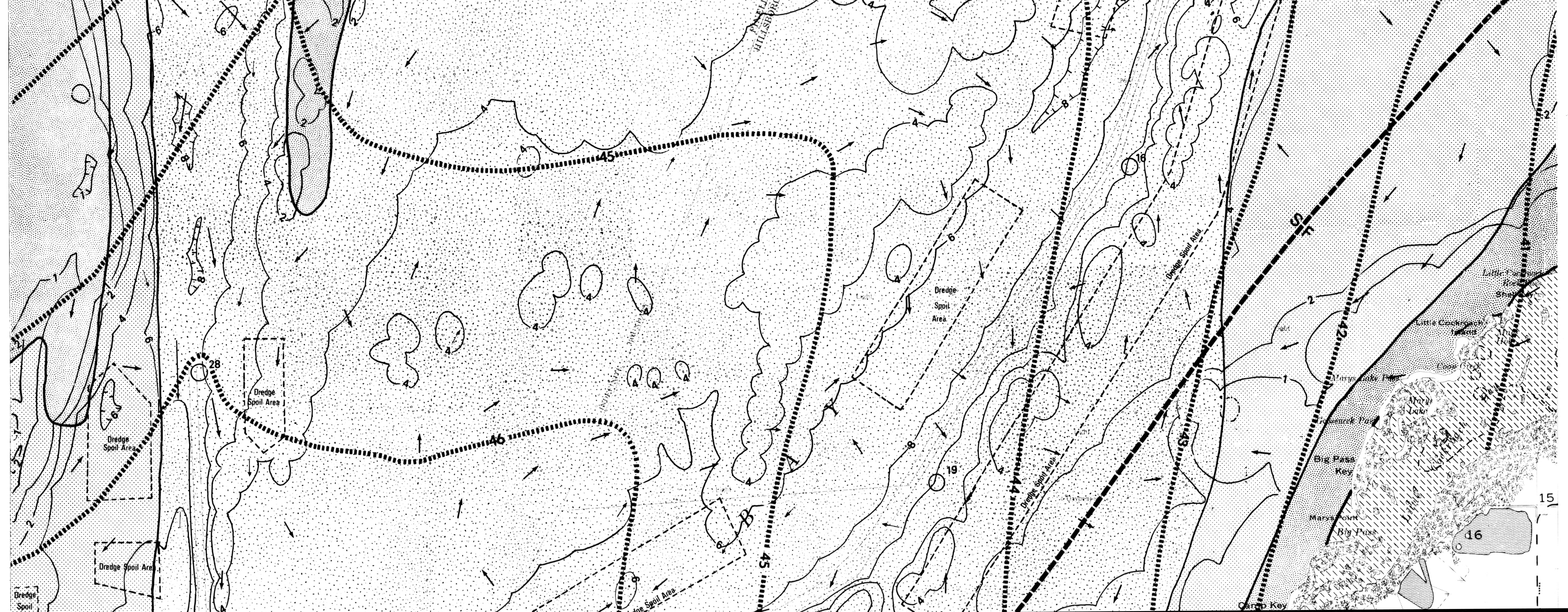
MAP B12

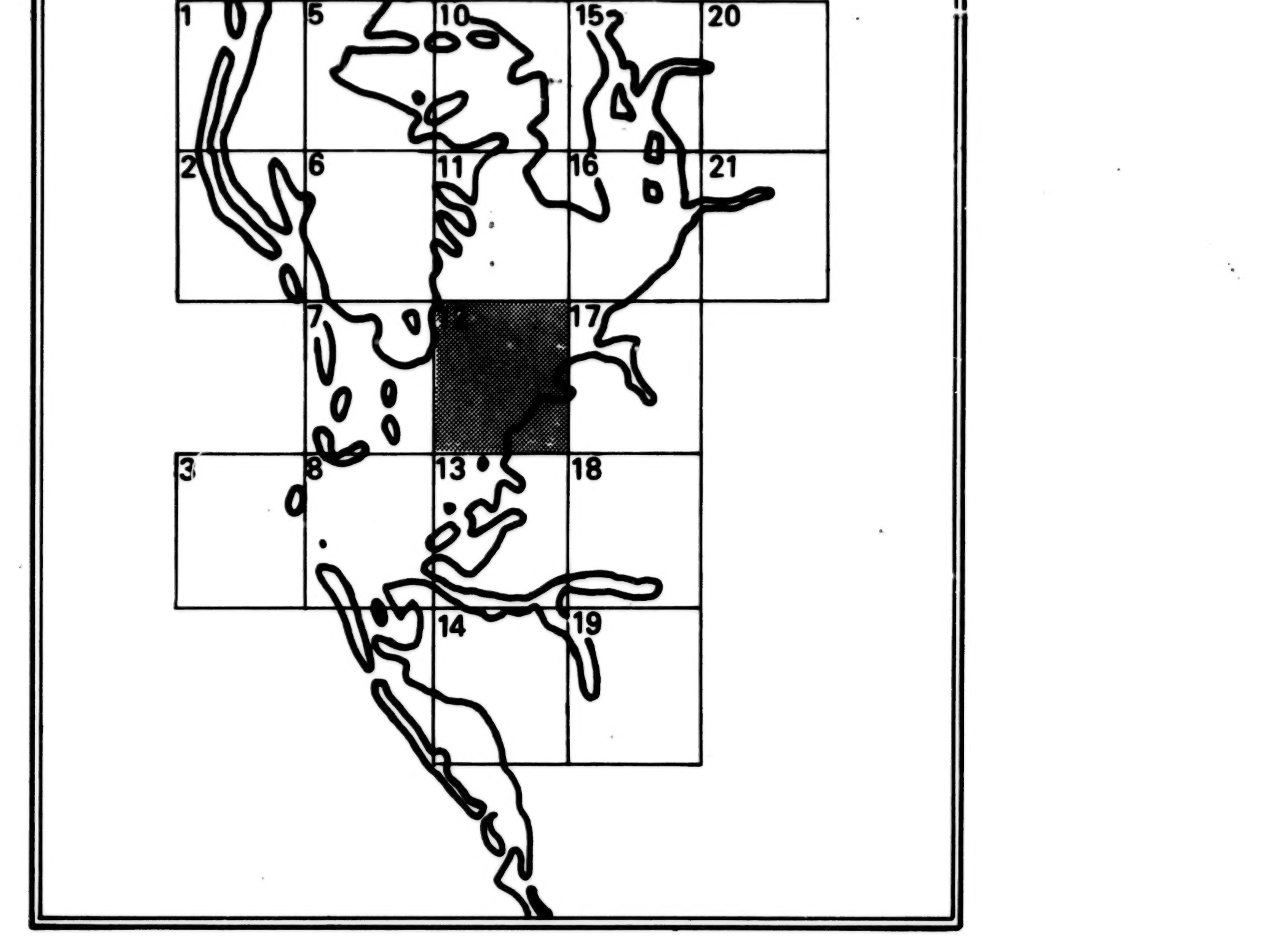
TAMPA BAY ENVIRONMENTAL ATLAS

WATER RESOURCES

COCKROACH BAY




Dredge Spoil Area
Dredge Spoil Area
Dredge Spoil Area
Dredge Spoil
Dredge Spoil Area
Dredge Spoil Area
28
45
46
43
42
41
SF
Little Cockroach Island
Little Cockroach Rock Pass
Shell Key
Mud Hole
Coon Creek
Marys Lake Pass
Marys Lake
Gooseneck Pass
Little Cockroach Bay
Big Pass Key
Marys Point
Big Pass
Camp Key
15
16


1
5
10
15
20
2
6
11
16
21
7
12
17
3
8
13
18
14
19

Scale 1:24,000

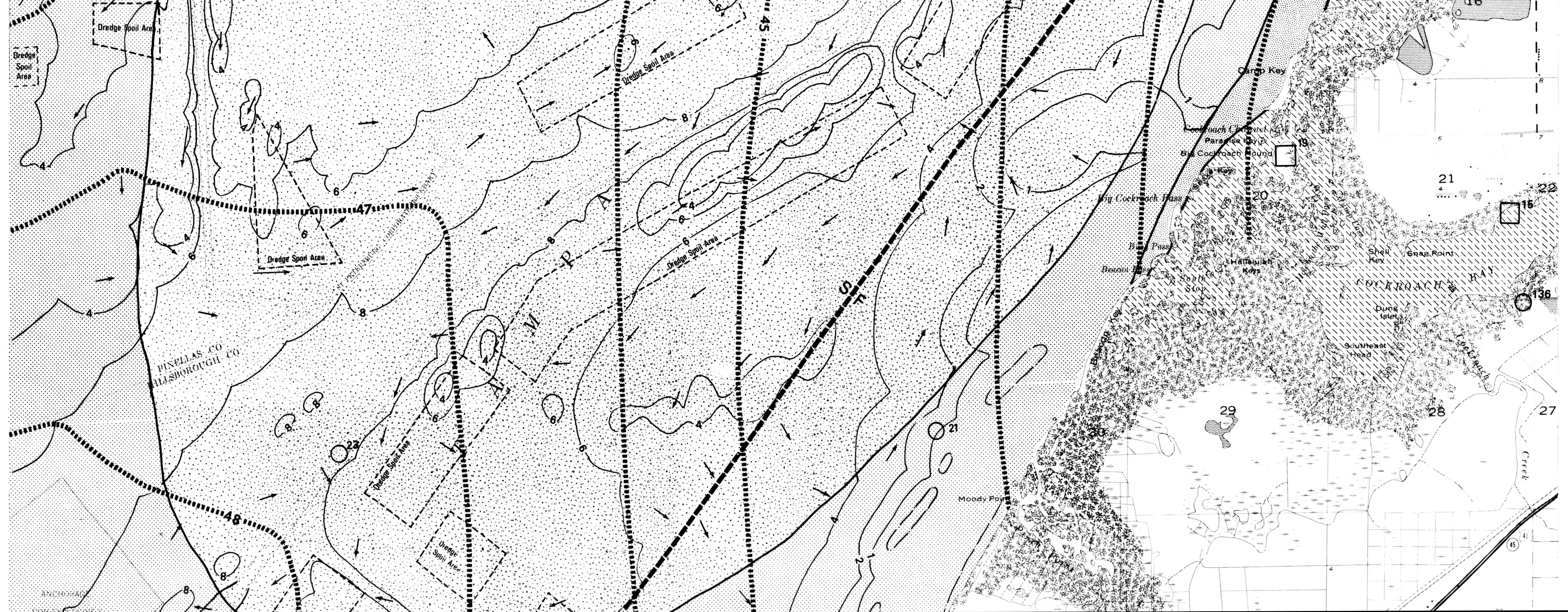
1984

TOPICAL MAPS IN THIS ATLAS:
A. BIOLOGICAL RESOURCES
B. WATER RESOURCES

Produced by U.S. Fish and Wildlife Service
Projection and 1,000 meter grid, zone 17: Universal Transverse Mercator
10,000-foot grid ticks based on Florida coordinate system, east and west zones

Overlay material compiled in 1984 from latest available data obtained from Federal, State and Local government agencies and other sources.

There is no map A19 due to a lack of data.



Dredge Spoil Area
PINELLAS CO
HILLSBOROUGH CO
47
45
48
21
Camp Key
Cockroach Channel
Paradise Key
Big Cockroach Mound
19
Snake Key
Big Cockroach Pass
20
Bird Pass
Beacon Pass
South Stop
Hallelujah Keys
Shell Key
Snag Point
COCKROACH BAY
Dung Islet
136
15
16
21
22
27
28
29
Moody Point
Creek

system, east and west zones

Overlay material compiled in 1984 from latest available data obtained from Federal, State and Local government agencies and other sources.

There is no map A19 due to a lack of data.

LEGEND

35 **MEAN ANNUAL MID-DEPTH SPECIFIC CONDUCTIVITY ISOPLETH (WATER QUALITY) CONTOUR MAP**

Five year mean annual specific conductivity
September 1978 - August 1983
(mmhos)

POINT SOURCE DISCHARGES *

▲10 Q= ___ Industrial Point Source Discharge. Q is permitted capacity in total gallons per day (tgd) or in millions of gallons per day (mgd).

△10 Q= ___ Municipal Point Source Discharge. Q is permitted capacity in total gallons per day (tgd) or millions of gallons per day (mgd).

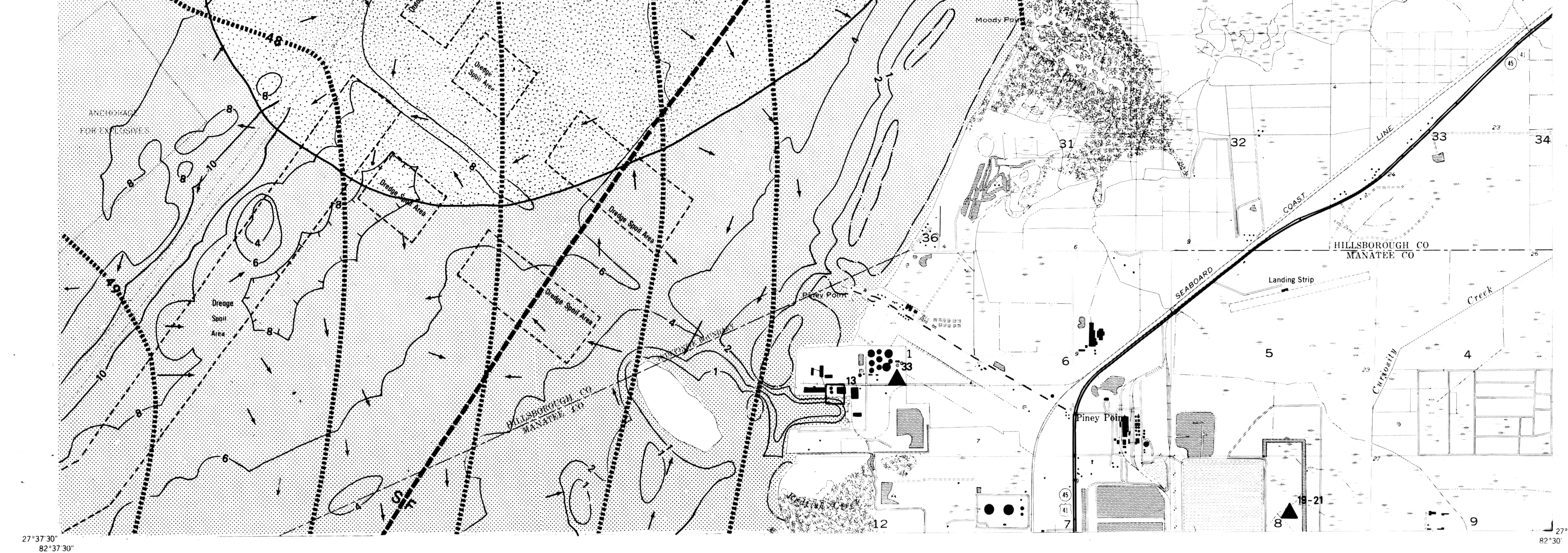
Dredge Spoil Area **DREDGE SPOIL DISPOSAL SITES**

TIDE STATION *
(National Ocean Service)

⊡10 Active tide station. The tide station number is listed next to the symbol.

□10 Inactive tide station location. The tide station number is listed next to the symbol.

○10 **WATER QUALITY SAMPLING STATION ***
(Hillsborough County Environmental Protection Commission)
Five year seasonal means, Sept. 1978 - Aug. 1983


Moody Pt
31
32
33
34
36
HILLSBOROUGH CO
MANATEE CO
SEABOARD COAST LINE
Landing Strip
Piney Point
Dredge Spoil Area
13
1
33
6
5
4
12
7
8
9
19-21
27°37'30"
82°37'30"
27°37'30"
82°30'

Active tide station. The tide station number is listed next to the symbol.

□ 10 Inactive tide station location. The tide station number is listed next to the symbol.

○ 10 **WATER QUALITY SAMPLING STATION** *
(Hillsborough County Environmental Protection Commission)
Five year seasonal means, Sept. 1978 - Aug. 1983

——2—— **BATHYMETRY**

The contour interval is 2.0 meters with an initial 1.0 meter supplemental contour line added to better define shoals and inshore tidal flats.

—·—·—·— **INTERTIDAL ZONE**

This zone demarcates the area exposed and flooded by the tides and occurs between the line and the shore.

GENERALIZED SEDIMENT MAP

▨	Sand
▨	Shelly Sand
▨	Silty Sand
▨	Clayey Sand
▨	Sandy Clay
▨	Silt

NET TIDAL CURRENT

Resultant tidal current. The direction is indicated by the arrow and the discharge range is feet per second

→	0.01 - 0.10 ft/sec
→	0.11 - 0.20 ft/sec
→	0.21 - 0.30 ft/sec
→	0.31 - 0.50 ft/sec
→	> 0.50 ft/sec

F/S **FRESHWATER/SALTWATER INTERFACE**
(U.S. Geological Survey 1979)
250 mg/l line of equal chloride concentration in the upper part of Floridan aquifer.

SCALE 1:24 000
1 ½ 0 1 MILE
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

THE TAMPA BAY ENVIRONMENTAL ATLAS WAS PRODUCED BY THE U.S. FISH AND

N.O.S. TIDE STATIONS: Index of tide stations for the state of

27°37'30"
82°37'30"
12
7
8
9
16-21
27°37'30"
82°30'

THE TAMPA BAY ENVIRONMENTAL ATLAS WAS PRODUCED BY THE U.S. FISH AND WILDLIFE SERVICE, DIVISION OF BIOLOGICAL SERVICES NATIONAL COASTAL ECOSYSTEMS TEAM (FWS/OBS) FOR COASTAL PLANNERS, DECISION MAKERS AND THE GENERAL PUBLIC, TO DETERMINE AND EVALUATE CHANGE AND TO RESOLVE CONFLICTS AMONG LAND USES, FISH AND WILDLIFE REQUIREMENTS, AND THE MAINTENANCE OF ECOLOGICAL DIVERSITY. THE STUDY AREA INCLUDES A MAJOR PORTION OF THE COASTAL COUNTIES OF PINELLAS, HILLSBOROUGH, MANATEE, AND A SMALL PORTION OF SARASOTA. THERE IS NO ATTEMPT, IN THE DESIGN OR PRODUCTS OF THIS STUDY, TO DEFINE THE LIMITS OF PROPRIETARY JURISDICTION OF ANY FEDERAL, STATE, OR LOCAL GOVERNMENT TO ESTABLISH THE GEOGRAPHICAL SCOPE OF THE REGULATORY PROGRAMS OF GOVERNMENT AGENCIES.

THIS MAP HAS BEEN COMPILED FROM A VARIETY OF SOURCE MATERIALS INCLUDING MAPS, AERIAL PHOTOS, AND REPORTS. SINCE MANY SOURCES CONTAINED GENERALIZED LOCATIONS OF RESOURCES AND OTHER MAPPED FEATURES, THE USER SHOULD NOT RELY ON THESE MAPS FOR PRECISE MEASUREMENTS OF DISTANCES OR AREAS.

PRIMARY SOURCES OF MAPPED INFORMATION

SALINITY: Conductivity for Tampa Bay water quality sampling stations Sept. 1978 - August 1983. Hillsborough County Environmental Protection Commission.

POINT SOURCE DISCHARGES: Computer printout of industrial and municipal point source discharges in West Central Florida. Florida Dept. of Environmental Regulation, 1983.

DREDGE SPOIL DISPOSAL AREAS: Dredge and Spoil easement location maps. Florida Dept. of Natural Resources.

N.O.S. TIDE STATIONS: Index of tide stations for the state of Florida. National Ocean Service, Rockville, Md. 1981.

WATER QUALITY: Total chlorophyll, conductivity, turbidity, temperature and total nitrogen data for Tampa Bay water quality stations, Sept. 1978 - August 1983. Hillsborough County Environmental Protection Commission.

BATHYMETRIC: Bathymetric map to St. Petersburg Quadrangle, N.O.S. 1978.

INTERTIDAL ZONE: Nautical Chart #'s 11410, 11413, 11414 and 11425. N.O.S., Rockville, Md. 1983.

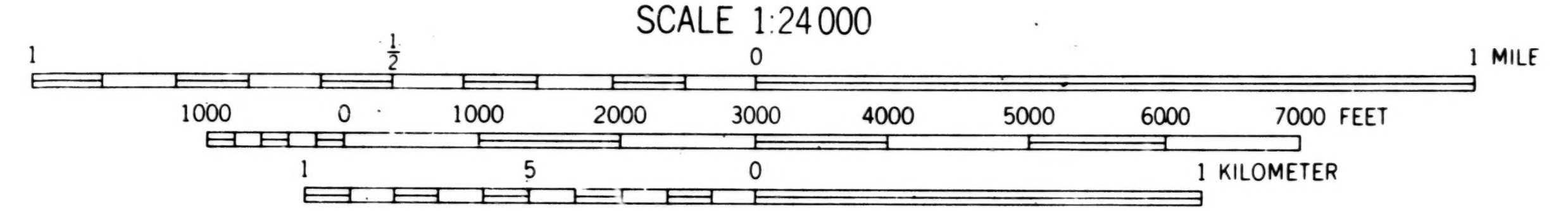
SEDIMENTS: Sediments, oceanographic observations and Floristic data for Tampa Bay, Florida and adjacent waters, 1961-1965, Taylor and Saloman, 1969.

TIDAL CURRENTS: Changes in tidal flow, circulation and flushing caused by dredge and fill in Tampa Bay, Florida. U.S. Geological Survey Open File Report #84-447. Goodwin, 1984.

FRESHWATER-SALTWATER INTERFACE: Position of the Freshwater-Saltwater interface in the upper part of the Floridan aquifer, Southwest Florida, 1979. U.S.G.S. water resources open-file report 82-90. Causseaux and Fretwell, 1982.

FOR COMPLETE REFERENCE SEE MAP NARRATIVE

SCALE 1:24000



Supplemental Legend (Cont'd)

Station #23 Lat. 27°39'50" Long. 82°35'52"

PARAMETER	SPRING (3-5)	SUMMER (6-8)	FALL (9-11)	WINTER (12-2)	ANNUAL (1-12)
Total Chlorophyll (ug/l)	20.8	16.1	20.6	11.7	17.3
Conductivity (mmhos)	47100	47460	46366	50283	47802
Turbidity (NTU'S)	4.0	2.2	3.7	3.4	3.3
Temperature (°C)	27.2	29.7	25.4	16.5	23.4
Total Nitrogen (mg/l)	0.60	0.53	0.60	0.42	0.54

Station #28 Lat. 27°42'28" Long. 82°36'34"

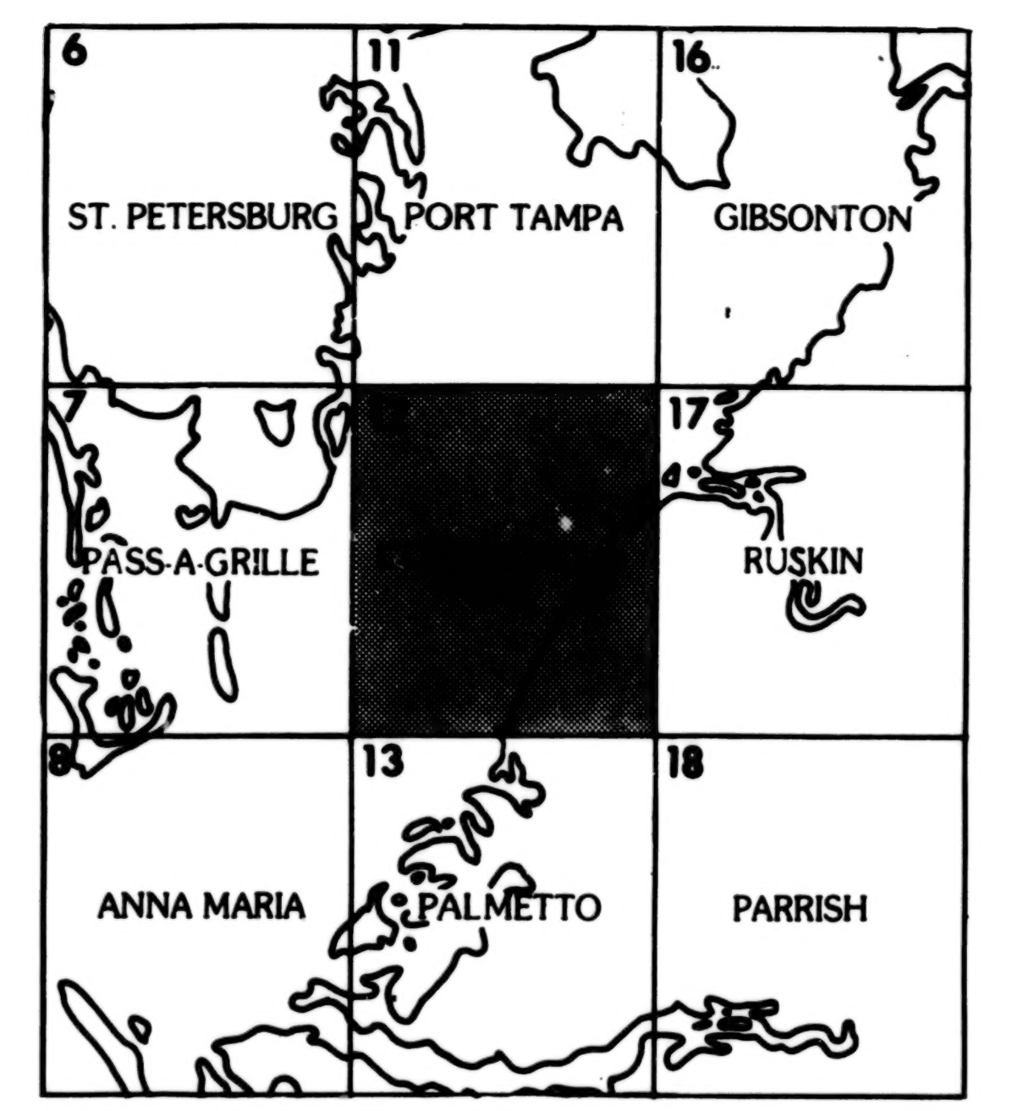
PARAMETER	SPRING (3-5)	SUMMER (6-8)	FALL (9-11)	WINTER (12-2)	ANNUAL (1-12)
Total Chlorophyll (ug/l)	24.6	28.5	26.8	14.6	23.6
Conductivity (mmhos)	47333	44044	41633	47958	45242
Turbidity (NTU'S)	5.1	4.6	3.8	3.2	4.2
Temperature (°C)	22.8	29.5	25.4	16.7	23.6
Total Nitrogen (mg/l)	0.53	0.65	0.76	0.51	0.61

Station #84 Lat. 27°44'30" Long. 82°30'12"

PARAMETER	SPRING (3-5)	SUMMER (6-8)	FALL (9-11)	WINTER (12-2)	ANNUAL (1-12)
Total Chlorophyll (ug/l)	31.5	41.6	30.4	19.6	30.8
Conductivity (mmhos)	40966	41011	38767	41972	40679
Turbidity (NTU'S)	6.6	8.5	4.3	4.5	6.0
Temperature (°C)	22.4	29.1	24.5	16.1	23.0
Total Nitrogen (mg/l)	0.76	0.95	1.45	0.57	0.93

Station #136 Lat. 27°40'30" Long. 82°30'15"

PARAMETER	SPRING (3-5)	SUMMER (6-8)	FALL (9-11)	WINTER (12-2)	ANNUAL (1-12)
Total Chlorophyll (ug/l)	28.1	41.5	43.7	42.6	39.0
Conductivity (mmhos)	30377	35005	24004	29446	29708
Turbidity (NTU'S)	5.2	6.6	5.6	4.5	5.5
Temperature (°C)	25.2	30.0	26.1	17.7	24.8
Total Nitrogen (mg/l)	1.26	1.35	1.37	1.29	1.32



Note: Specific conductivity values on the supplemental legend should be in μmhos.

→ 0.11 - 0.20 ft/sec

→ 0.21 - 0.30 ft/sec

→ 0.31 - 0.50 ft/sec

→ > 0.50 ft/sec

F/S **FRESHWATER/SALTWATER INTERFACE**

(U.S. Geological Survey 1979)
250 mg/l line of equal chloride concentration in the upper part of Floridan aquifer.

**Symbols appearing with numbers are described more fully in the narrative*

Supplemental Legend for Water Quality Stations on This Map

Station #16 Lat. 27°43'21" Long. 82°32'05"

PARAMETER	SPRING (3-5)	SUMMER (6-8)	FALL (9-11)	WINTER (12-2)	ANNUAL (1-12)
Total Chlorophyll (ug/l)	23.9	20.2	20.8	16.1	20.2
Conductivity (mmhos)	42650	44238	42833	45308	43757
Turbidity (NTU'S)	5.1	3.5	3.6	4.1	4.1
Temperature (°C)	22.2	29.5	24.8	16.1	23.2
Total Nitrogen (mg/l)	0.69	0.65	0.81	0.53	0.67

Station #19 Lat. 27°41'59" Long. 82°32'59"

PARAMETER	SPRING (3-5)	SUMMER (6-8)	FALL (9-11)	WINTER (12-2)	ANNUAL (1-12)
Total Chlorophyll (ug/l)	23.5	17.1	20.3	14.0	18.7
Conductivity (mmhos)	44267	45482	43666	46913	45082
Turbidity (NTU'S)	4.5	3.1	2.9	2.9	3.4
Temperature (°C)	22.2	29.5	24.6	16.3	23.2
Total Nitrogen (mg/l)	0.50	0.62	0.76	0.41	0.57

Station #21 Lat. 27°40'06" Long. 82°33'04"

PARAMETER	SPRING (3-5)	SUMMER (6-8)	FALL (9-11)	WINTER (12-2)	ANNUAL (1-12)
Total Chlorophyll (ug/l)	21.4	19.4	21.8	12.6	18.8
Conductivity (mmhos)	45400	46954	45566	48157	46519
Turbidity (NTU'S)	4.7	6.8	3.9	3.3	4.7
Temperature (°C)	22.2	29.6	25.1	16.3	23.3
Total Nitrogen (mg/l)	0.41	0.54	0.87	0.38	0.55

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NBS - 1010a
(ANSI and ISO TEST CHART No. 2)